

(12) PATENT APPLICATION
(19) AUSTRALIAN PATENT OFFICE

(11) Application No. AU 199928128 A1

(54) Title
One- time-use payment card and method

(51)⁶ International Patent Classification(s)
G07F 007/08 G07F 007/12
B42D 015/10 G07F 015/02
G07F 007/10

(21) Application No: 199928128

(22) Application Date: 1999.05.13

(30) Priority Data

(31) Number	(32) Date	(33) Country
PP3553	1998.05.15	AU

(43) Publication Date : 1999.11.25

(43) Publication Journal Date : 1999.11.25

(71) Applicant(s)
Schmidt Electronic Laboratories Pty. Ltd.

(72) Inventor(s)
Gary Schmidt

(74) Agent/Attorney
CARTER SMITH and BEADLE, Qantas House, 2 Railway Parade, CAMBERWELL VIC
3124

AUSTRALIA

Patents Act 1990

**COMPLETE SPECIFICATION
FOR A STANDARD PATENT**

ORIGINAL

Name of Applicant:	SCHMIDT ELECTRONIC LABORATORIES PTY. LTD.
Actual Inventor:	Gary Schmidt
Address for service in Australia:	CARTER SMITH & BEADLE 2 Railway Parade Camberwell Victoria 3124 Australia
Invention Title:	One-Time-Use Payment Card And Method

Details of Associated Provisional Application:

Australian Patent Application No. PP3553 filed 15 May 1998

The following statement is a full description of this invention, including the best method of performing it known to us

ONE-TIME-USE PAYMENT CARD AND METHOD

The present invention relates to a method of payment card processing and also to a payment card in the form of a one-time-use (OTU) payment card. The invention has particular utility in the taxi industry and will be described in relation thereto but it will be readily appreciated that it is not limited to this particular application and is in fact useful in all applications where conventional payment cards such as credit or charge cards are used.

Numerous government and commercial organisations issue payment cards (credit and charge cards) to senior executives in order to facilitate the payment of travel, entertainment and other expenses incurred by executives on behalf of the organisation. Many of the same organisations are reluctant however, to issue such cards to all staff, particularly junior casual or temporary staff, since they are concerned that, in some instances, there may be abuse of the cards. For this reason, the one-time-use payment voucher has been a popular payment tool in both the local and international taxi industries. There are a number of disadvantages to the voucher method of payment as follows:

Vouchers are generally distributed by taxi companies or organisations associated with taxi companies. This means that client organisations have an additional creditor to settle with on a regular basis.

Such vouchers are generally not linked to the client organisations' travel and entertainment payment card programs. This means that client organisations and their staff (or members) do not receive the benefits of their mainstream card loyalty programs when using taxi payment vouchers for the payment of taxi fares.

Mainstream card issuer organisations miss out on the opportunity to process many taxi fares which are paid for using the vouchers.

Vouchers are costly to process and require either manual data entry or optical character recognition systems or a combination of both.

It is an object of the present invention to provide a payment card which offers the same utility as a regular payment card such as a credit or charge card but which may only be used on one occasion. In other words, the card of the present invention is a hybrid of the regular plastic payment card and the one-time-use voucher and
5 incorporates the best features of each.

Accordingly, this invention provides a method of debiting a payment card user for a service and crediting a service provider, including the steps of issuing said user with a one-time-use (OTU) payment card, maintaining a database record of all transactions involving said card, processing the transaction to pay a service provider
10 in respect of a charged transaction amount involving said card, and in the event that the card has been previously used, debiting the service provider in respect of the previous use for an amount equal to said charged transaction amount, or some other predetermined amount.

In another form of the invention there is provided a one-time-use (OTU)
15 payment card including a card into which an identification number is coded, characterised in that, perforations or other means for facilitating separation of the card into two pieces to render it unusable, is provided on the card whereby, after use, said card may be separated to prevent further use.

In a further form of the invention there is provided a method of debiting a
20 payment card user for a service, and crediting a service provider, including the steps of issuing the user with a one-time-use (OTU) payment card from a card issuer, said card having a magnetic stripe onto which an identification number is coded, processing a charge against the OTU card by swiping the card through a magnetic stripe card reader of a payment terminal, having the user sign the card and separating
25 the card into two pieces such that part of the identification number is on one piece and part is on the other piece, said signature being on said one piece which is retained by the service provider and said other piece being returned to said user, and checking, at said card issuer via a database, to determine whether any previous transactions have been processed against said card.

In order that the invention may be more readily understood, one particular embodiment will now be described in more detail. The OTU card according to the embodiment is generally the same size and shape as a regular credit or charge card but is made from light cardboard material (the physical properties of charge cards, credit cards, debit cards etc regarding size, shape, thickness and flexibility are covered by International standards). The card of this embodiment features a magnetic stripe onto which identification numbers and other characters are encoded. A perforation is placed vertically through the centre of the card and perforates both the card body and the magnetic stripe. The card identification number straddles the perforations on the card so that when the card is broken along the perforations or score line part of the identification number will be on one part of the card and part on the other.

The method of the embodiment which involves transaction processing to pay a taxi fare is as follows:

The card is handed to the taxi driver at the end of the journey.

The driver swipes the card through a magnetic stripe card reader of a payment terminal and a receipt may be generated.

The card is returned to the passenger who will sign the card.

The passenger returns the card to the driver who separates the two portions of the card and retains the signed portion. The unsigned portion will be returned to the passenger.

The back-end processing of transactions, that is, processing by the card issuer, or other transaction processing organisation, is similar to that required for regular credit and charge card transactions, but with the following changes. A central processing computer maintains a database of all transactions. Records include card I.D. number and service provider I.D. number. The transaction processing system (TPS) checks each OTU card transaction (TXN) as follows:

1. Checks TXN's card number.

2. Is the TXN card number equal to an OTU card number? If no, exit program. If yes, continue to next step.
3. Search TXN database for presence of the same card number in any TXN.
- 5 4. If same OTU card number is found in the TXN database, continue to next step. If not found, exit program.
5. Note the service provider's I.D. (and any other I.D. numbers such as the taxi vehicle I.D., terminal I.D. and driver I.D.) of the TXN found in the database.
- 10 6. Use the I.D. numbers identified in the previous step to create a new debit TXN, that is, a TXN to be deducted from the service provider's account. The debit TXN will be for the value of the new TXN. In other words, the debit TXN will have:
 - 15 a) I.D. numbers including service provider I.D. number of the original TXN.
 - b) Value of the new TXN.
 - c) Date of new TXN.
7. Exit program.

The purpose of the above mentioned process is to determine whether the same card has been used previously. If the card has been used previously the value of the new transaction is debited from the first service provider's account and credited to the second provider's account. The first service provider's account is debited because it is apparent that the card has been used again after being processed on the first occasion. At that time the first service provider (or his agent, the driver) should have destroyed the card by separating the two portions. If the portions had been separated as required, the card could not have been used on a second or subsequent occasion.

The above procedure also ensures that card holders can only ever be billed with a single taxi fare for each OTU card issued to them.

Whilst the above describes one particular embodiment of the invention, it will

be readily appreciated that variations may be effected without departing from the scope of the invention.

For example, whilst the card is described as having a magnetic stripe and perforations to allow it to be separated into two pieces, other forms of card or card holder identification which can be detected, may be used. For example, embossed characters may be provided on the body of the card or data may be stored in an integrated circuit (or chip) attached to or integral with the card body. Cards can feature one or more of the abovementioned storage techniques. In Australia credit and charge cards include both embossed characters and a magnetic stripe whereas many European credit cards also include an integrated circuit.

Whilst for embossed or magnetic stripe cards it is relevant to talk about the card being separated in order to destroy the card number, this is not the case for integrated circuit cards (chip cards). For chip cards the separation of the card into two or more pieces makes it difficult, inconvenient or impossible to insert the card into a card accepting device thereby effectively rendering the card unusable. Other forms of payment card not yet envisaged but which can store an identification number that can be read or transferred using an appropriate reading or transferring device, are clearly applicable to the present invention.

Furthermore, other means for separating the card into two or more separate pieces such as groove or score lines may be used in preference to perforations, or alternatively, the card may have no such means and the method may rely solely on the service provider retaining the card after it is used for back-up or other purposes. Also, the method may involve the substitution of a transaction acquirer or transaction processor or scheme operator between the card issuer and the card user as, for example, a bank or like credit institution may acquire the transaction from the service provider and pass it on to the payment card issuer.

It should be appreciated that card issuers can supply each of the senior staff in an organisation with a regular plastic payment card, and quantities of OTU cards can also be supplied for distribution on an as needed basis to more junior, casual or

temporary staff or even to non-company personnel. For example, a business executive could supply a visiting colleague or associate with a OTU card so that the colleague or associate could take a one-way taxi ride to an airport. Further, a company could provide an OTU card to a visiting customer and thereby pay for the customer's taxi
5 fare on the company account.

A similar situation exists for parcel deliveries where an OTU card could be provided to a taxi driver together with a parcel and the card could be signed at the point of origin, or, alternatively the card could be supplied and signed at the destination. In such ways, all the disadvantages described hereinabove in relation to
10 the voucher method of payment will be obviated and a much more stream-lined method of payment will exist.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method of debiting a payment card user for a service and crediting a service provider, including the steps of issuing said user with a one-time-use (OTU) payment card, processing the transaction to pay a service provider in respect of a charged transaction amount involving said card, and in the event that the card has been previously used, debiting the service provider in respect of the previous use for an amount equal to said charged transaction amount, or some other predetermined amount.
2. The method of claim 1 further comprising maintaining a database record of all transactions involving said card, for the purpose of determining a previous use and debiting the service provider in respect of said previous use.
3. The method of claim 2 further comprising the step of said service provider rendering said card unusable after processing said transaction by destroying said card or taking said card out of circulation.
4. The method of claim 3 wherein said OTU card is separable into two or more pieces by means of perforations, a score line or other suitable means whereby after separation an identification number, relevant to said user, is destroyed, characterised in that, said rendering of the card unusable involves the step of said service provider separating said card after initial use.
5. The method of claim 4 wherein said initial use comprises the service provider firstly presenting said OTU card to a device which transfers an impression of said identification number of said card, which is embossed onto said card, onto a payment voucher to record said transaction.
6. The method of claim 4 wherein said initial use comprises firstly presenting said OTU card to an IC card accepting device for electronically recording information from said card.
7. The method of claim 4 wherein said initial use comprises the service provider

firstly swiping said OTU card through a magnetic stripe card reader of a payment terminal to electronically record information from said card.

8. A method of debiting a payment card user for a service, and crediting a service provider, including the steps of issuing the user with a one-time-use (OTU) payment card from a card issuer, said card having a magnetic stripe onto which an identification number is coded, processing a charge against the OTU card by swiping the card through a magnetic stripe card reader of a payment terminal, having the user sign the card and separating the card into two pieces such that part of the identification number is on one piece and part is on the other piece, said signature being on said one piece which is retained by the service provider and said other piece being returned to said user, and checking, at said card issuer via a database, to determine whether any previous transactions have been processed against said card.

9. The method of claim 8 wherein said method further comprises crediting said service provider for the amount of said transaction and, if a previous transaction has been processed against said card, debiting the previous service provider for an amount equal to said previous transaction or some other predetermined amount.

10. A one-time-use (OTU) payment card including a card into which an identification number is coded, characterised in that, perforations or other means for facilitating separation of the card into two or more pieces to render it unusable, is provided on the card whereby, after use, said card may be separated to prevent further use.

11. A OTU payment card according to claim 10 wherein said card has a magnetic stripe into which said identification number is coded and said perforations or other means for separation of the card into two pieces extends through said identification number.

12. A OTU payment card according to claim 10 wherein said card has an integrated circuit into which said identification number is stored.

13. A OTU payment card according to claim 10 wherein said card has an

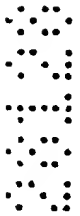
identification number embossed onto said card and said perforations or other means for facilitating separation of the card extends through said identification number.

14. A OTU payment card according to claims 10 - 13 made of cardboard material and said means for facilitating separation comprises perforations bisecting said card.

DATED: 13 May 1999

CARTER SMITH & BEADLE
Patent Attorneys for the Applicant:

SCHMIDT ELECTRONIC LABORATORIES PTY. LTD.



ABSTRACT

A method of debiting a payment card user (credit or charge card user) for goods or services and crediting a provider of goods or services involves a card issuer issuing the card user with a one-time-use (OTU) payment card. The credit provider
5 card issuer, transaction acquirer or transaction processor maintains a database record of transactions involving said card, processes any transaction and credits the service provider in respect of a charged transaction amount involving the card. In the event that the card has been previously used the service provider in respect of the previous use is debited for an amount equal to said charged transaction amount, or some other
10 predetermined amount possibly including the charged transaction amount and a penalty. A OTU card formed from cardboard or like material is also claimed, said card having perforations or a weakened section to allow it to be easily destroyed by said service provider after initial use.